IN THE SPECIFICATION:

Please amend the specification as follows. No new matter has been introduced.

On page 3, line 4 please insert the following sentence preceding the phrase "For illustrative purposes,".

Reference now is made to FIG. 1.

On page 3, please replace the second full paragraph with the following replacement paragraph.

The C-arm is then positioned, so that the target area and a part of the needle are both visible on the X-ray image I_1. The surgeon defines the projection f of the needle entry pointy F and projection t of the 3D anatomical target T in the image. At this point of the description, it is assumed T remains static during the procedure.

On page 3, please replace the third full paragraph with the following replacement paragraph.

First, the mechanical device moves the needle in an arbitrary plane P_1 containing F until the projection of the needle is aligned with the target t in the image I_1 (see FIG. 1a). This can be performed in 3 iterations using the visual servoing technique presented in the next section. The final position of the needle in plane P.sub.1 is called D_1 ~~L_1~~.

On page 3, please replace the fourth full paragraph with the following replacement paragraph.

The system repeats this process by choosing a second plane P_2 containing F. The choice of P_2 is arbitrary. In practice, the system takes P_2 perpendicular to P_1 for precision purposes. The needle is rotated in plane P_2 until it is visually aligned to the target t in the image I_1 (see FIG. 1b). This is done as previously described by using the visual servoing technique presented in section 2. The position of the needle that gives visual alignment is called $\underline{D_2}$ ~~L_2~~.

On page 4, please replace the first full paragraph with the following replacement paragraph.

The positions of the needle $\underline{D_1}$ ~~L_1~~ $\subset P_1$ and $\underline{D_2}$ ~~L_2~~ $\subset P_2$ define a unique plane P, which contains the X-ray source, the target point T and the fixed entry point F. This is essentially the maximum information that can be obtained from a single viewpoint.

On page 4, please replace the second full paragraph with the following replacement paragraph.

The physician needs to move the C-arm to a second viewing direction. The surgeon defines projection f' of needle entry point F and the projection t' of the 3D target point T in the new image $\underline{I_2}$. Next, the needle is moved only in the plane P until the needle is once again visually aligned to the target in the image $\underline{I_2}$ (see FIG. 1c). This is done using the visual servoing approach of section 2. This results in the final 3D alignment $\underline{D_T}$ of the needle, the entry point and the anatomic target point. The needle is then ready to be inserted. The correctness of the alignment can also be checked by moving the C-arm to a third viewing direction.

On page 4, line 26 please insert the following sentence at the beginning of the fourth full paragraph.

Reference now is made to FIG. 2.

Please replace the paragraph beginning on page 12, line 19, and ending on page 13, line 5, with the following replacement paragraph.

In accordance with an embodiment of the invention, a primary target for biopsy and a secondary target through which a biopsy needle must pass on its way to the primary target are given. The method for determining the best entry point for a percutaneous procedure in accordance with the invention comprises steps shown in FIG. 5 for the embodiment being considered. The primary target T and secondary target U through which the needle must pass are provided at step 51. First, a first and second arbitrary entry points on a patient are selected at steps 52 and 53, respectively, the second point being different from the first point, followed by the following steps: determining at step 54 the three dimensional (3-D) orientation of the needle at the first arbitrary entry point for pointing the needle at the primary target; determining at step 55 the 3-D orientation of the needle at the first arbitrary entry point for pointing the needle at the secondary target; determining at step 56 the 3-D dimensional orientation of the needle at the second arbitrary entry point for pointing the needle at the primary target; determining at step 54 the 3-D orientation of the needle at the second arbitrary entry point for pointing the needle at the secondary target; and, at step 58, determining a 3-D line representing the intersection of a first plane containing the first arbitrary entry point, the primary target point, and the secondary target point, and a second plane containing the second arbitrary entry point, the primary target, and the secondary target point, whereby the 3-D line provides a position and orientation for the needle for performing needle biopsy of the primary target through the secondary target.

Please replace the paragraph beginning on page 14, line 4, with the following replacement paragraph.

The method comprises the steps shown in FIG. 7 for this embodiment. The C-arm position, the target point for needle biopsy, the entry point on the patient, and the plane within which the needle can rotate are provided at step 70. These include placing the needle in an arbitrary orientation around the given entry point at step 71, the orientation being associated with an angle $\theta 1$ with respect to an arbitrary reference direction; obtain a 2-dimensional (2-D) projection image of the needle in the image plane; measure at step 72 the position l1 of the 2-D projection image; rotate at step 73 the needle around the entry point by an angle $\Delta\theta$ to a position $(\theta 1+\Delta\theta)$ in the given plane; measure the position l2 of the 2-D projection image at step 74; rotate the needle around the entry point by an angle $\Delta\theta$ at step 75 to a position $\theta 3=(\theta 1+2*\Delta\theta$; measure at step 76 the position l3 of the 2-D projection image; locate at step 77 2-D points *f* and *t* in the 2-D projection image that are the respective 2-D projections of the target point and the entry point, the points f and t defining an image line It=(ft); calculate the cross-ratio c=(I1, I2, I3, It) at step 78; and at step 79, determine a 3-D angle θt such that c=(θ1, θ2, θ3, θt); and rotate the needle around the entry point by θt from position θ3 in the given plane, whereby the needle is positioned in three dimensional space at the entry point along a direction such that the needle is visually aligned to 2-D projection image of the target in the image plane.